INSTITUTE FOR SOCIAL AND ECONOMIC CHANGE

REPORT OF THE PROJECT ON

EDUCATIONAL FILM MATERIALS

(Sponsored by NCERT, Delhi and Organised by ISEC, Bangalore)

With Compliments From
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Ex-Director, NCERT

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1st October 1977 to 30th June 1978

Education Play Materials Manual

developed as an outcome of

this project and written by

Smt. Indira Swaminathan

is printed separately

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FOREWORD

I have pleasure in writing this brief foreword to the report of the Project on Educational Play Materials prepared by an IASEC team headed by Prof C D Deogowda, then Hon. Senior Fellow, and Head of the Education Unit in the Institute. The systematic way in which Prof Deogowda approached his task is evident from the account of the proceedings of the seminar with which he started and the subsequent follow-up action by the two field investigators who constituted his team. He has done an excellent job and I am glad that it is now being published by the NCERT.

I have always believed that play-material can form a very useful medium for the education of children. The play motive is very strong in children of all countries and India is no exception. If, instead of leaving play material to be used only by children whose parents can afford it and their content left to arbitrary or un-informed choice, we were to take up play material as a definite instrument of children's education and include it in the curricula with the appropriate play equipment, it will go a long way to make education more interesting for children and also more retentive in their memory. Of course the play material should be properly planned

and in doing so, full advantage should be taken of the abundance of play material existing in the country through our cottage industries and home-crafts and necessary selection made from the same. In addition, new play material could be designed or the old ones modified to fit in with the objective underlying the introduction of play material into the curriculum. This will not only help in the better education of our children but also lead to a badly needed support for at least some of our cottage and home industries.

I commend this report to the attention not only of those in charge of children's education but also of the parents who are also vitally interested in the betterment of their children's education.

VTRV Rao
Chairman, Board of Governors

Institute for Social
and Economic Change,
Bangalore
12 September 1978.

tln.

Preface

Play is spontaneous and natural to the child. Many complex concepts are often mastered by children through varieties of games. For instance take the simple wooden top. Children very soon get to know how tight the string should be wound around the top so that it spins well; what should be the force with which the top should be thrown for spinning it for a long duration, how sharp the pin should be for good spinning and so on. A simple wooden top which is available in almost any part of the country thus has a large educational potential. Unfortunately such simple play materials are not used in class room situations. Much of the teaching that is done in our primary schools is still bookish and not very meaningful to the child.

Children learn by doing. It is through interacting with materials around him that he learns. These materials need not involve a high cost. Folk toys, traditional festival toys, natural materials etc. have all got great educational potential. It is necessary for us to find out the variety of materials that exist in the immediate environment of the child and how they can be used to make the teaching-learning process meaningful and interesting.

With this aim in view, the Children's Media Laboratory of NCERT has started its work on the Play Material Project of Karnataka and has got the Manual developed for teachers on how to use the traditional play materials for teaching-learning in class rooms. I hope that very soon such Manuals will be available for all the states in the country.

S K Mitra
Director, NCERT

Introduction

The Government of India in collaboration with the UNICEF have set up a Children's Media Laboratory in the Centre for Educational Technology Cell of the National Council of Educational Research and Training, New Delhi for the purpose of:

a) Identifying play materials and toys of educational and entertainment value now used in India.

b) Developing prototypes for use on a large scale.

c) Providing a detailed Manual for the same.

The specific objective of C M L is to develop or discover inexpensive, non-formal and effective media of educational and entertainment value for children from 3 to 8 years of age. For this purpose, the NCERT initiated Research Projects in Gujarat, Karnataka and one of the eastern states during the year 1977-78, and the Research Project in Karnataka was entrusted to the Education Unit of the Institute for Social and Economic Change, Bangalore.

The main objectives of the project for Karnataka were as follows:

1. To conduct a survey of available toys of educational and recreational value in the State of Karnataka.

2. To develop a manual for their use.

3. To suggest lines on which the available toys could be modified to increase their educational potential.

4. To devise new toys out of locally available materials.

For the purpose of carrying out this project, I was appointed as Director. The project was officially started in the month of October 1977 and was completed in the month of June 1978 with the assistance of two field investigators, resource persons and Education Unit staff of ISEC.

I am grateful to the NCERT for sponsoring this project and providing academic and financial support. I acknowledge with gratitude the sincere help rendered by the education unit staff of ISEC and all the individuals and Institutions who contributed to the successful completion of the project.

Dr A C Deve Gowda

Report of the Project on "Educational Play Materials"

The children Media Laboratory in the Centre of Educational Technology Cell of NCERT intiated a project on Educational Play Materials in three Indian states and Karnataka State was one among them. The project work was entrusted to the Institute for Social and Economic Chance, Bangalore.

To start with a seminar was organised by the Education Unit of the Institute for Social and Economic Change on 11, 12 and 13 of October 1977. The venue was the ISEC, Bangalore-72.

The objectives of the Seminar were:

1. Preparing a list of individuals, firms, institutions and offices who may be contacted and visited.

2. Suggesting guidelines for the selection and purchase of samples of play materials of educational value.

3. Developing criteria for deciding the educational value of play materials.

4. Demonstration of play materials brought by manufacturers and discussion about the same.

5. Suggesting ideas and methods for the preparation and distribution of materials for effective use.

6. Developing ideas and methods for preparation of prototypes.

7. Developing proforma for data collection, tabulation etc.

8. Preparation of an overall plan of action for the period of the project.

9. Giving publicity and creating awareness about the educational value of play materials.

Participants:

Principals of selected Pre-Primary Teacher Training Institutions, Nursery Schools, Manufacturers of play materials, representatives from the DSERT, Department of Public Instruction, Educational Officers and other persons who are directly or indirectly connected with the manufacture and use of play materials, participated in the Seminar. The total number of participants was 31 (Appendix VII).

Inaugural Function:

The Seminar was inaugurated by Dr VKRV Rao, Chairman, Board of Governors of the Institute for Social and Economic Change at 10.30 A.M. on 11th October 1977. It was held in the Seminar Hall of ISEC.

Dr A C Devegowda, the Director of the Seminar gave a warm welcome to Dr VKPV Rao, Dr(Mrs) Muralidharan, Project Co-ordinator, NCERT, Delhi and the invities and the participants of the Seminar.

Inaugurating the Seminar Dr VKRV Rao called upon the educators to realise the importance of the play in the education of children. He said that the children should be given ample opportunities to express their creative abilities through play. Instead of concentrating our attention on the routine method of using play materials, he said that, we shoul encourage children to use play materials in new ways. Talking about the economic aspects of play materials he emphasized that the play materials should not be expensive and that they should be manufactured out of readily available raw materials such as cloth, mud, wood etc. Taking the example of used and empty match boxes he explained how we can reduce the cost of manufacture of play materials. Further he said that the imaginative teacher could use the play materials in a most

effective manner and hence there is a need for [illegible] in our Pre-Primary Schools. He pointed out that education is not meant for the acquisition of knowledge only but it should develop character, aesthetic sense and values like love, peace, tenderness, kindness and discipline. The play materials help in achieving these objectives of education.

Sri C S Seshadri, the Director of the Institute, in his presidential speech emphasized that play is an important means of education and the present unfavourable attitude that exists in the minds of the people towards play should be changed. He said that the people should be made aware of the necessity of allowing their children to play.

Professor S R Rohidekar proposed a vote of thanks to the chief guest and the president of the function, He extended his thanks to one and all who attended the function.

I Session:

A Work Paper (Appendix III) was presented in the Seminar by Dr A C Devegowda, Director of the Project and the proceedings of the Seminar were conducted in accordance with the programme of work as given in the Work Paper.

At first Dr (Mrs.) Muralidharan, Project Co-ordinator, NCERT explained the objectives of the Children's

Media Laboratory that is being planned to be set up in the Educational Technology Cell of the NCERT.

The objectives are as follows:

1. To locate and collect existing toys and play materials that are in use by children between the ages of 3 and 8, in rural and urban areas and to explore the possibilities of their use for children's learning and development. This will also necessitate the preparation and dissemination of guide notes or manuals for teachers' use.

2. To develop prototypes of play materials which will help children in their learning process and to modify the existing play materials so as to make them more useful; and

3. To train teachers to use them properly.

In addition to this she also pointed out that the reason for selecting Karnataka as one of the places for the project was that play materials are being prepared on a large scale in Karnataka.

Mrs Indira Swaminathan, President of Educator Manufacturer Association (Edma) said that the problem on hand was not merely of preparing prototypes but also to consider the steps that should be taken after the prototypes are prepared.

Many suggestions were put forward by the participants. Among them the important were, to arrange a central and mobile exhibition with the co-operation of manufacturers and to establish model equipment centres and this task may be undertaken by DSERT. A suggestion was also made by Smt Malini Rao to visit the University of Kerala (Department of Psychology) to study the methodology of collecting the play materials. A suggestion was made by Mrs Indu Krishnappa that we may contact the Government of India Design Centre in Bangalore.

II Session:

Certain recommendations were made in this session on the subject of reducing the cost of manufacture and on purchasing play materials to the schools.

1. The State and Central Government should give a helping hand in supplying toys to schools and it was suggested that 50% of the expenditure should be met by the Central Government and 50% by the State Government. If the school is a private institution 25% should be met by the State Government and 25% by the Management. It was felt that such a step would improve the quality of primary education and reduce wastage and stagnation.

2. Village Panchayats should also be approached to assist in buying materials to schools.

3. A certain percentage of money which is given to the DDPIs towards the purchase of books and equipment to schools should be spent for purchasing play materials.

4. Sales tax on play materials should be removed.

5. Women should be encouraged to prepare educational play material through grants from the Social Welfare Department and the Karnataka State Social Welfare Advisory Board to Mahila Samajas etc.

III Session:

In this session discussion was held on preparing a list of individuals, firms, institutions from which the play materials could be collected. After a long discussion, the participants were requested to prepare and send the list of the same in their area to the Institute after they go back to their places.

IV Session: 12.10.1977

On the second day the participants met under the presidentship of Dr A C Devegowda. A number of play materials were exhibited by the representatives of the manufacturers who had brought the play materials from various parts of Karnataka. They explained their uses and educational values

to the participants and it was followed by discussion. Later on they discussed about the cost of production and how the cost could be brought down so that a large number of schools could buy them.

V Session:

The above discussion was continued and Sri Subbaramaiah the Principal of Sri Visweswaraiah Pre-Primary Teachers' Training Institute demonstrated how play materials made out of mud could be used by children of the age-group 3-4 years. The activity was said to be suitable for the muscular development and also for social education. Mrs Indira Swaminathan explained to the participants the use of Edma play materials and their educational value. Professor S R Rohidekar asked the participants to suggest some ideas for those who are preparing toys for educational purposes.

VI Sessions:

In the afternoon session Sri Profulla Chandra of Mysore Toys, Mysore, explained the various play materials and their educational value for social, emotional and muscular development.

VII Session:

1. It was suggested that each of the participating manufacturers may be requested to give one set of play

materials free of cost. Other manufacturers may also be approached for such free supply. It was also decided that in some cases we may purchase play materials also.

2. Sri S R Krishna Murthy of Toy Palace, Mysore agreed to give one set free. Mrs Muralidharan stated that the Children's Media Laboratory would send play materials if a suitable place is provided in the State to keep them.

3. We may also obtain catalogues of play materials from different sources e.g. Embassies and Consulates.

Then a discussion was held about the data collection and it was decided that data should be in a tabular form as indicated below:

1. Name of the Play material
2. Place, Taluk and District.
3. Name of the possessor or user.
4. Raw materials used - wood, cloth, clay, industrial waste etc.
5. Cost and durability.
6. Whether used as play material or teaching aid.
7. Hand made or machine made.
8. Availability.
9. At what age level it is being used.

10. Purpose for which it is used.

    i. Language
    ii. Maths
    iii. Science
    iv. Social Studies
    v. Sense training
    vi. Concept formation
    vii. Muscular development
    viii. Social development

11. For what standard it is suitable

12. Used by Girls or Boys or by both

13. Type -

    a. Folk
    b. Festival
    c. Specially as play material
    d. Specially as a teaching aid.

14. A short description of the material

VIII Session: 13-10-77

In this session there was a discussion on the subject of preparing prototypes and certain suggestions were given by the participants on type of people who should be involved in preparing prototypes. It was also suggested to arrange for a orientation programme for the investigators.

The following procedure was evolved to collect the play materials:

1. Visiting Nursery Schools.
2. Meeting manufacturers
3. Contacting folk-lore societies and cottage industries
4. Discussion with Assistant Educational Officers.
5. Social Welfare Department
6. Balasevikas
7. Tribal Art Association (Kaveri Emporium)

IX Session:

The following suggestions were given to prepare the Manual:

1. The materials should be categorised under certain groups and the Manual should indicate the age group, cost, availability, educational objectives, methods of using etc.

2. Educational value should be mentioned for each material.

3. Photos or diagramatic representation of play materials should be included.

4. Directions to use the material should be given.

5. The Manual should be of the book size for primary schools.

6. It should be published both in English and Malayalam Languages. The ISERT may be requested to take the responsibility of printing the manual.

7. The time required for collecting materials from various places was decided to be 4 months for field work and 3 months were allotted to office work.

A decision was also taken to organise a Workshop in the ISEC campus for further discussion about the play materials that are collected by the investigators.

There should be a Workshop in the last fortnight for 2 days for discussing the Manual and finalizing the Project. The invitiees should be the Director of Public Instruction (Primary Education), Nursery and Primary School Teachers (one from each Division), one or two persons from Nursery TTIs and Primary TTIs, 1 or 2 persons from the Department of Social Welfare, State Social Welfare Advisory Board, State Council for Children's Welfare and Department of Women and Child Welfare.

A Working Group of about 6 persons should meet for about a week to prepare prototypes.

At the conclusion of this Project a programme may be organised through AIR to give publicity to the work

of the Project. Articles may be published in Newspapers and CITY TAB. A programme may also be organised through the SITE.

Valedictory Session:

On behalf of the ISEC, Education Unit and on behalf of the participants Professor S R Rohidekar welcomed the chief guest of the function, Dr(Mrs.) Muralidharan, the Project Co-ordinator, NCERT, Delhi and she was requested to deliver the Valedictory Address.

In her Valedictory speech, Mrs. Muralidharan explained the importance of the Project and the rationale behind the selection of Karnataka State to undertake the Project. She also said that the Project was undertaken to evolve an All India Pattern in using play materials. She added that play is the best medium for learning and social interaction. It should be encouraged throughout the country. She concluded her address by wishing success to the persons involved in executing the plans. Dr A S Seetharamu, Fellow in Education, ISEC proposed a vote of thanks.

Summary of suggestions given in the course of the Seminar:

1. The DSERT may be requested to set up a model equipment centre.

2. A mobile exhibition of play materials accompanied by a trained teacher may be organised.

3. The ISEC may organise an exhibition of play materials to be supplied by the manufacturers.

4. Steps should be taken to give publicity to and for creating an awareness of the educational value of play materials.

5. The cost of play materials should be reduced.

6. Gifted persons and institutions who can make and use play materials should be identified.

7. Manufacturers may be requested to give one set of play materials free of cost.

8. Catalogues of play materials may be obtained from various sources.

9. Children's Media Laboratory may be requested to send one set of play materials which may be kept in the Bala Bhavan or some other suitable place.

10. Schools (where practical classes such as carpentry and metal work are held) may be advised to prepare play materials.

11. A letter to the Director of Public Instruction should be written requesting him to send a circular to all the Assistant Educational Officers to render assistance in the project.

12. Teacher's Associations should be requested to collect names of individuals, institutions who will be useful in this project and to send them to ISPC.

13. An attempt should be made to find out the waste materials in industries and how to utilise them to prepare educational play materials.

14. An introductory chapter may be included in the Manual dealing with the importance of play materials and the project etc.

15. Balasevikas may be requested by the Social Welfare Department to give information about toys and play materials.

16. A two days Workshop for the dissemination of the result of the project should be organised. Teachers of Primary and Nursery Schools and Teachers Training Institutes, Officers of the Department of Public Instruction, Department of Social Welfare and Balawadi Supervisors may be invited.

17. Some articles should be prepared and published in Newspapers.

18. Balabhavan, Delhi may be contacted.

19. A S Lucas of HAL High School, Subbarao of Kalamandir, Gopaleswamy, Assistant Master, Vidyanagar may also be contacted.

20. Asian Foundation for the handicapped may be contacted.

Recommendations:

1. Government may be requested to approve the purchase of play materials out of equipment grant.

2. School Betterment Committee may be permitted to spend money on purchase or preparation of play materials.

Based on the suggestions and recommendations offered during the course of the seminar, an "Investigator's Proforma" (Appendix II) was prepared to enable the investigators to collect the required information during the course of their field visits.

After the seminar, the investigators were asked to visit the local nursery schools to collect information regarding the educational play materials that were being used in these schools. This preliminary visit to the local nursery schools facilitated the investigators to get a clear picture as to what were the common educational play materials that were being used in these schools and also the different types of materials that served the purpose of education.

The investigators later obtained the list of nursery schools and Balawadis in the Karnataka State from the Department of Public Instruction and the Department of Social Welfare and the State Advisory Board for Social Welfare. And a sample of nursery schools that were to be visited was selected from this list by them in consultation with the Director of the Project and the other staff of the Unit. They were later asked to prepare a list of manufacturers of educational play materials and toys in the State. The tour programme to visit these manufacturers was arranged in consultation with the Director and the other staff of the Unit. They were also asked to prepare a list of folk-lore societies and cottage industries.

c) The Field Trips were undertaken by the investigators in the month of January and February. The places, persons and schools visited are enclosed in a separate list (Appendix VI).

The task assigned to the investigators during their field trips was as follows:-

I. <u>Visit to Nursery Schools and Balawadis</u>:

a. to prepare a list of educational play materials - both teacher made and manufactured.

b. to request the teachers to demonstrate the use of play materials in various contexts.

c. to take notes of such demonstrations.

d. to get samples of teacher-made play materials, if available.

e. to note down the mechanism of preparation, cost involved, material used etc.

f. to take care to avoid repetitions in preparing such notes.

g. to get the source of procurement and the address to visit if they are manufactured locally.

h. to get all the details for teacher made materials.

i. to prepare, if possible, a list of commonly used play materials notifying whether they are teacher-made or manufactured.

II. Visiting Manufacturers:

To prepare a chart of educational play materials and toys manufactured by them covering the aspects mentioned in the Proforma shown in Appendix II.

III. Visiting Folk-lore Societies:

1. to prepare a list of play materials

2. to collect information about the sources of procurement if it is in folk-lore societies.

IV. Cottage Industries:

The procedure followed regarding the collection of play materials from Cottage Industries was similar to

that of the Manufacturers.

After obtaining the necessary instructions from the Director of the Project and the other staff of the Unit, the investigators started their field trips to the following places:

The first and the foremost field trip to be undertaken by the investigators was to Channapatna, a well known and famous toy centre for the manufacture of wooden toys in the State of Karnataka. The two investigators were accompanied by Smt Nagarathna, Lecturer, DSERT, Bangalore, who acted as a Resource Consultant in guiding the investigators in the collection and purchase of educational play materials. They visited the famous Toy Centre and the Artisan Training Centre in this place to get to know the ways and means of obtaining the rawmaterials and also the whole mechanism of manufacturing the toys. They also met an expert in model making to find out the materials prepared by him.

The next field trip to be undertaken by the field investigators was to Mysore, an equally popular Toy Centre. They visited some selected Nursery schools in this place to ascertain the different kinds of play materials that are being used. They also paid visits to some toy manufacturing

companies and to some artists who were involved in the preparation of clay models and other wooden toys. The required play materials were purchased by the investigators from the manufacturers.

The next field trip was undertaken by the investigators to Dharwar, Gokak and Belgaum. The first person to be met there was the Child Development Project Officer, Dharwar who helped the investigators in the collection of play materials. The investigators along with the Child Development Project Officer visited the Nursery School run by the Rural Development Training Centre to have a look at the play materials prepared out of locally available cheap materials like clay, paper, empty match boxes etc. The investigators were also apprised of the entire mechanism of the preparation of these play materials. The investigators also paid a visit to Anganawadis run by Women and Children Welfare Department to find out the different kinds of play materials used by these Anganawadis. A visit was also paid to the Nursery School run by the Lion's Club, the Teacher Training Institute for Women and to the Nursery School run by Karnataka High School under the able guidance of one Mr Banakar, who has got the play materials prepared by the local carpenters.

In Gokak, the investigators visited a Nursery School, Government Carpentry Training Centre, Karnataka Health Institute at Ghataprabha and the Toys Manufacturing Company at Gokak run under the control of Gokak Chitrakala Sahakara Sangha. The above toy manufacturers were preparing beautiful models of vegetables, fruits and other model out of locally available wood.

The field investigators visited Shahapur and Jedgalli in Belgaum, where a large number of toys were being manufactured for the benefit of Nursery school children. A visit was also paid to an expert in making models of various animals, vehicles and such other things. A sample of these materials were purchased. And some more play materials were also purchased from the Government Dolls and Toys Training Centre. In addition some Nursery Schools and Teacher Training Institutions were also visited.

The investigators undertook their penultimate trip to Shimoga to collect the required information. They visited a Convent Nursery School and a Government Nursery School. Later they visited a firm run under the auspices of Sri Devappa Badigara, an experienced artist and a carpenter. Though however he was concerned with the manufacture of wooden articles, it was noticed that no educational play

materials was prepared by him. They were able to see some beautiful puppets prepared by the trainees and the staff when they visited the National Education Society Teacher Training Institute. Some locally made educational play materials were purchased by the investigators at the Educational stores.

The last and the final field trip to be undertaken by the investigators was to Bangalore. They were accompanied by Mrs Indira Swaminathan, Director, Play House, Bangalore who acted as a Resource Consultant. Here they met the famous Yakshgana Puppet Player, Mr Kamath and had a look at the different puppets prepared by him. They also met Mr Hegde who was training the students for Yakshagana Role plays in his institution. They explained the different requirements for Yakshagana plays and other details. They were later directed to Mr Haridas Bhat of Coondapur to get the literature on Yakshagana. They also visited the All India Handicrafts Marketing and Service Extension Centre, Coondapur; but no suitable play material was found there.

Later at Belthangadi the investigators met one Mr Diwakara Patawardhana, an expert in Tenku Tithina Yakshagana Plays. A sample of puppets was purchased from him. And in addition some Nursery schools were also visited by them.

After the completion of the field trips, the investigators prepared a comprehensive list of play materials (Appendix XI) collected by them from the different parts of the State. Also a comprehensive list of play materials (Appendix IV) that were being used in the Nursery Schools of Bangalore City was prepared by them after visiting some of the Nursery Schools.

d) Panel Meeting:

After the completion of the data collection for the purpose of the Project, a meeting was held on 14.4.78 to chalk out and finalise the programme of work that needed to be done during the next months. The following persons attended the meeting:-

1. Dr A C Devegowda, Director of the 'Play Material Project'.
2. Sri S R Rohidekar, Senior (Hon.) Fellow, Education Unit, ISEC
3. Dr A S Seetharamu, Fellow, Education Unit, ISEC.
4. Dr (Mrs) Muralidharan, Project Co-ordinator, CET, NCERT, Delhi.
5. Smt Indira Swaminathan, Director, Play House, Bangalore.
6. Sri V K Krishnappa, Field Investigator Educational Play Materials Project.
7. Sri M Siddarajappa, Field Investigator Educational Play Materials Project.

During the course of the meeting, the following decisions were arrived at:-

I. The work of preparing the Manual should be entrusted to Mrs. Indira Swaminathan and the Manual should be completed by the end of May 1978.

II. Some more play materials should be collected from the following:

i) Handicrafts Board (Soap Stone).
ii) Cauvery Emporium
iii) Design Centre.

III. Appointment of a Steno-Typist to work with Mrs Indira Swaminathan.

IV. All the play materials to be labelled and numbered.

V. A Workshop to be conducted in the month of June 1978 to discuss the following:-

i) Developing Prototypes

ii) Revision and discussion of the Manual.

VI. The Project report to be prepared by Prof S R Rohidekar.

The following day Dr (Mrs.) Muralidharan and Mrs Indira Swaminathan along with the two Field Investigators visited Ramanagaram and Channapatna to get an idea as to what were the common play materials that were being found in these places and also to suggest to the two investigators some more additional play materials that could be collected for the project.

e) Workshop: 24.6.78 to 25.6.78

A State Level Workshop was conducted on 24 and 25 June 1978 at Pashtreeya Vidyalaya Teachers College, Bangalore. This workshop was the final programme of the NCERT Project on 'Educational Play Materials'. The Chief objectives of the Workshop were as follows:-

1. Exhibition of the Educational Play Materials and discussion about the same.

2. Presentation and discussion of the manual on 'Educational Play Materials in Karnataka.'

3. To give an orientation to the participants to provide educational value to the collected play materials.

A highlight of this workshop was an exhibition of the Educational Play Materials. The Exhibition consisted of the following:

1. Play materials collected by the investigators from all regions of the state which included the traditional, festival and folk toys in addition to the educational toys of the manufacturers (Appendix XI).

2. Play Materials used in selected Nursery Schools in Bangalore City (Appendix VIII).

3. Play Materials of the Manufacturers like 'Kaveri' Arts & Crafts Emporium, the Dynam Engineering Corporation and the Mysore Toys.

There were nineteen participants in the workshop and they consisted of the following:-

(Appendix V)

1.	Teachers from Pre-Primary Schools	(4)
2.	Teacher Educators of Pre-Primary Teacher Training Institutions	(5)
3.	Representative of the DSERT	(1)
4.	Representative of the Karnataka State Council for Child Welfare	(1)
5.	Representative of the Women and Children's Welfare Department	(1)
6.	Representative of the Karnataka State Social Welfare Advisory Board	(1)
7.	Representatives of Manufacturers of Educational Play Materials	(2)
8.	The staff of the Project and Education Unit of the Institute for Social and Economic Change	(4)

In addition to the above participants, the following persons also took part in the Workshop:-

(i) Baldwin's Nursery School Teachers

(ii) Carmel School Teachers

(iii) Channamma Memorial School Teachers

(iv) Karnataka Educational and Cultural Society Teachers

(v) Balasevika Trainees, K.S.C.C.W.

(vi) Mr.C.C.Soni, Field Investigator, Play Material Project (Gujarat), State Institute of Education, Raikhad, Ahmedabad

(vii) Mrs.Jayalakshmi, Director Play Material Project (Tamil Nadu), Principal, Vidyavikasini, 259 D.B.Road, Coimbatur - 641 002

The above workshop-cum-exhibition was inaugurated by Sri.T.R.Jayaraman, I.A.S., Vice Chancellor, Bangalore University at 10.00 a.m. on 24 June 1978. The venue was Rashtreeya Vidyalaya Teachers' College, Bangalore. The above function was presided over by Sri.C.S.Seshadri, I.A.S., Director (Acting), I.S.E.C.

While welcoming the chief guest and the participants, Dr.A.C.Devegowda, the Director of the 'Educational Play Materials' Project gave a brief introduction about the project. He said that the project has been successfully completed and the bye-product of the project viz., the Manual on Educational Play Materials in Karnataka has been prepared by Mrs.Indira Swaminathan. While speaking about the Manual, he said that the author had done exceedingly good work and the sincere effort put in by the author to develop this Manual was highly laudable. He said that this Manual would be printed for the benefit of all Nursery Schools.

Dr (Mrs.)Muralicharan, Project Co-ordinator, CET, NCERT, in her Introductory Speech said that this 'Educational Play Materials' Project in Karnataka was the first project to be undertaken by the CET of NCERT, under the Children's Media Laboratory, the main objective of the Project being exploring the different kinds of play

materials that are available in the state of Karnataka as the state is famous for traditional, festival and seasonal toys. She said that yet another objective of this C.M.L. was to make a way for these toys to get into the schools. She further stated that since we cannot afford to buy expensive Play Materials, we should look for those toys which are easily available and inexpensive. She said that the chief objectives of this project in Karnataka were as follows:-

1. Survey of Play Materials.
2. To develop a Manual for the Play Materials regarding their use and description of their educational potential.
3. To suggest certain modifications to increase their educational potential which the manufacturer can carry out with minimum effort and cost.

She further said that under this scheme of C.M.L., they have also developed a series of picture books for young children to cultivate interest in reading. She said, in addition to this, there are also some films and filmstrips to train 'adult interveners' (Balasevikas) who intervene with young children to develop curiosity in children. And these films also enable the children to see and perceive education as a joyful and meaningful experience. She said that there are also

good Radio Programmes to inform the parents regarding the education of their children. All these programmes, she said are right now in Hindi, and they would soon be translated into other regional languages.

Inaugural Address:

Sri.T.P.Jayaraman, Vice-Chancellor of Bangalore University, while inaugurating the Workshop commended the UNICEF's help in aiding such projects. He said that the development of educational play materials scientifically without much cost is absolutely necessary for the proper development of the children. He said that suitable educational toys have to be developed to develop skills and vocabulary in children. He said that there is a paucity of suitable educational toys in our schools and most of the toys that are available are costly and some are dangerous. He said that the modern toys do not hold the attention of the children and that we should do something about developing suitable toys which can satisfy the needs and interests of all kinds of children-gifted, slow learners, average, physically and mentally handicapped. He said that enough care should be taken to produce educational toys scientifically and that they should be recommended by the concerned experts in the field.

He said, suitable attention should also be given to develop play materials to develop vocabulary and aesthetic sense in children. While concluding, he said that the toys should be freed from sales tax.

Presidential Address:

Sri C S Seshadri, Director(Acting), ISEC said that the pre-primary stage is the most crucial stage for the children as we set the pattern for the rest of their lives. It is very essential to make pre-primary education a pleasant affair rather than a disciplinarian act. And further he said that the children should be allowed to interact freely with nature so that they can produce excellent pieces of art by making use of the 'line and form' in nature. He said that the children should be given colours and paints to reveal their aesthetic talents and the chemical paint which is very costly and dangerous should as far as possible be avoided. He said that no Nation can think of providing play materials to the vast number of children. Hence guidelines for the teachers to innovate and invent play materials out of the locally available resources is an absolute requisite. And this would definitely enable the children to become successful and better citizens of the country.

Dr Govind, on behalf of the Institute for Social and Economic Change, and the Project personnel proposed a hearty vote of thanks to the Chief Guests and the Participants.

First Session

The First Session of the Workshop started with an introduction of the 'Play Materials' Project by Dr A C Devegowda Director of the Project. Later Mrs Indira Swaminathan, Director, 'Play House', Ban galore introduced the Manual to the Participants. While presenting the Manual, Mrs Swaminathan said that the Manual was an outcome of the collected play materials for the Project from various regions of Karnataka and was not an exhaustive one. She was sorry she could not supply a copy of the Manual to each of the participants due to lack of time.

While describing the Manual, chapter-wise she said that the Manual was not exhaustive and it could only be a 'guide' to the user. She said that the Manual contained the

background of Karnataka in relation to toys of various kinds festival, National, seasonal and traditional. She said that while writing the Manual, enough attention had been paid to develop divergent and creative thinking in the children by making use of these Play Materials. She also said, while describing the educational potential of each play material, the play aspect and the educational aspect had been given due importance. She said that play is something spontaneous and the teachers should be extremely resourceful as to innovate suitable plays under different circumstances by making use of these play materials.

Later the participants were asked to go and observe the play materials that were kept in the exhibition and write comments on the same for further discussion in the next session.

Afternoon Session:

The afternoon session started with the reaction of the participants to the exhibits. While initiating the discussion one of the participants said that the play materials should be such that most of the Institutions could afford to buy them. They should have greater educational value with minimum cost. She also stated that opportunity could be

provided to those willing persons who are interested for making indigeneous play materials.

Another participant highlighted the need for inexpensive play materials for the socially disadvantaged children. And it was also pointed out during this session that play materials made out of 'cane' could also be provided for children.

Mrs Swaminathan explained the role of visual experience and cognitive concept of everyday materials by children. She said that play materials made out of wood and other industrial junk could play an important role in educating the children. While all the participants appreciated wholeheartedly the collection of play materials from different parts of the state, Dr (Mrs.) Muralidharan requested the participants to help them in adding other toys, particularly, traditional, if they had been left out by any chance.

Mrs. Swaminathan also brought to the notice of the participants the educational value of the traditional games of Karnataka.

Mrs. Nagarathna, Lecturer, DSERT, said that there should be a special chapter in the Manual regarding the play materials for children belonging to age group of six to eight

years as the objectives of primary education differed from those of pre-primary education.

Another participant said that developing unsuitable books for pre-primary children should be discouraged and that manufacturing suitable toys should be encouraged.

While concluding this session, Mrs Swaminathan said that the teachers should make use of all the play materials that are available in their schools rather than keeping them in cup boards for decoration purpose.

25.6.78:

Morning Session:

This session started with the practical activities for the participants. They were provided with the following materials to make educational play materials:-

Clay	Chart Paper	Coloured Paper
Coir	Glazed Paper	Paints
		Crayons etc.

The participants prepared different kinds of play materials by making use of the above materials(Appendix IX).

Afternoon Session:

This session started with the demonstration of the play materials prepared by the participants. Each

participant demonstrated the play material and described the educational value of each one; and all the materials prepared by them were exhibited in the evening before the chief guests.

Valedictory Function:

The Valedictory Function of the Workshop on 'Educational Play Materials' was held on 25 June 1978 at 4.00 p.m. The Valedictory address was delivered by Sri S M Yahya, Minister for Finance, Government of Karnataka and the Presidential Address was given by Sri K Nallappa, Additional Director of Public Instruction (Primary Education).

Sri S R Rohidekar, Senior (Hon) Fellow, Education Unit, ISEC welcomed the chief guests and the participants of the Valedictory function.

Dr A C Devegowda, Director of the Project, while giving a brief introduction about the project, said that the Project was officially begun in the month of October 1977, and two investigators were appointed for the purpose of data collection and Mrs Swaminathan was entrusted with the work of preparing the Manual for the Play Materials in Karnataka State. He said that the Manual could be printed for the benefit of the pre-school teachers and could also be translated

into Hindi and Kannada.

He also apprised the Minister of the various activities that were organised during the workshop and while concluding he suggested the following :-

1. DSERT or the Additional Director of Public Instruction (Primary Education) can take up the responsibility of providing suitable accommodation to house the collected play materials for a permanent exhibition for the benefit of all Nursery School Teachers.

2. Arranging a Mobile Exhibition for the benefit of rural children.

3. A Competition for pre-primary teachers to prepare their own play materials should be arranged and the best one could be awarded a prize, each year.

Valedictory Address:

Sri S M Yahya, Minister for Finance, delivering the valedictory address appreciated the collection of play materials in the Exhibition and said that Dr A C Devegowda, the Director of the Project needs to be congratulated for successfully completing the Project. He said that there was a vast increase in the number of schools offering pre-primary and primary education. But the greatest irony he said was that the quality of education was not being maintained while

keeping pace with the quantity. He said that providing good education was the responsibility of society, government and educational institutions. He said that the sense of commitment was lacking in people and this had resulted in the mushroom growth of 'teaching shops; he said that the vested interests in the field of education had very much affected the quality of education and since this malady was very difficult to eradicate, sincere effort should be put in at least to mitigate the same. Hence it was very essential for us to become committed to the cause of the nation, service to the society and values in life. He emphasized that pre-primary education alone could give good and proper grounding for good education. He said that it was not enough if merely large amounts of money were spent on education, but the proper utilisation of the same was more important. Referring to the malpractices in Pre-Primary and Primary Educational Institutions, he said that the exploitation by private individuals should be curbed and a ceiling on fees in private educational institutions should be fixed and implemented. He said that he was not personally in favour of nationalisation of private educational institutions as the survival of private institutions was very necessary for providing good education.

He further stated that education should inculcate values like truth, honesty etc., for building up a good nation. Speaking about the abolition of sales tax on educational play materials, he said that it was not possible to remove taxes entirely but a concession for recognised institutions to buy educational play materials could be allowed.

Presidential Address:

Presiding over the function, Sri.K.Mallappa, Director of Public Instruction (Primary Education) said that the people had taken a fancy to admit their children to English Medium Nursery Schools. This craze for English medium schools should be curbed. He said that Nationalisation of private institutions was the cure all for the problems in Education and that fixing a ceiling limit in the case of unaided Nursery and Primary Schools could create further problems. He said that money was being spent very wisely on primary education by the Department of Public Instruction. He said that there was a great demand for establishing good pre-primary schools in slums and for other weaker sections of the society. He emphasized that Pre-Primary Education needed a lot of attention both from the government and from the public.

Regarding the accommodation for a permanent exhibition, he said that the collected materials could be handed over to Sri.J.M.T.Rajan, Director,DSERT. He also said that Sri.Rajan in consultation with Sri.Mecci, Assistant Director of Public Instruction, Audio-visual section could arrange a competition to award a prize for the best play material made by Nursery School Teachers.

Dr(Mrs.)Muralidharan, on behalf of the NCERT and TSEC proposed a hearty vote of thanks to the Chief guests and all the participants. She said that this Project was only a beginning and not the end, for teachers should make use of the guidelines given in the Manual for making proper use of the play materials and the support and encouragement by the department of education was very necessary for the same.

APPENDIX - II

INVESTIGATORS' PROFORMA

1) Name of the manufacturer

2) Educational background of the manufacturer

1) Name of the play material

2) Place, Taluk and District

3) Name of the possessor or user

4) Type
   a. Folk
   b. Festival
   c. Specially for educational purpose

5) Raw materials used

6) Hand made or machine made

7) Mechanism and stages of preparation

8) Cost Rs. Paise

9) Durability

10) Availability

1) Whether used as play material or teaching aid

2) At what age level or standard it is being used

3) For what purpose it is used
   a. Language
   b. Concept formation
   c. Social studies
   d. Science
   e. Sense training
   f. Maths etc

4) Used by boys or girls or by both

5) A short description of the play material

APPENDIX ~~III~~ II

Seminar on : "Educational Play Materials".
11, 12 and 13 October, 1977.

WORK - PAPER

Importance of Play Materials:- Children are full of curiosity about people and things in their surroundings. They play with all sorts of materials and get absorbed in putting parts together and in breaking things apart. They watch, observe, handle and play with various toys and things of various shapes and colours. These activities of children, if used properly have great educational value. Learning through play and play-way methods is exciting, interesting and joyful to them. This is specially seen in pre-primary and lower primary stages of learning. Much of drudgery and dis-interestedness in schools can be minimised by using play materials and play-way methods. This fact is known by teachers and parents alike.

Difficulties:- In a poor country like India, people feel that provision of play-materials and facilities is a costly affair and hence the teachers rule out the most effective media of education and resort to verbal and abstract teaching. It is, therefore, necessary to find ways and means by which our pre-primary and lower primary

schools can use worthwhile play materials which are within their financial reach. An all-out national effort is necessary in this regard.

Childrens' Media Laboratory:- It is with the above object mainly in view that the NCERT planned to set up a Children's Media Laboratory in the Educational Technology Cell. The work of the Laboratory is of two types:

i) to locate the existing toys, play-materials and games that are prevalent in rural and urban areas and to explore the possibilities of their use for children's learning and development; this will also necessitate the preparation and dissemination of guide-notes or Manuals for teacher's use, and

ii) to develop proto types and learning materials of a play-way type necessary for children's easier and absorbed learning activities.

Plan of action:- In order to achieve the above goals action has to be taken:

a. to make a survey of available play-materials of educational value in Karnataka,

b. to develop proper Manuals for their use,

c. to work-out methods by which the available materials can be improved to increase their educational value, and

d. to develop proto types of new play-materials that can be prepared cheaply and economically from the available local materials. This will involve expertise from educationists, manufacturers and businessmen interested in this project.

Programme of Work at the Seminar

1. Deciding the expected outcomes of the Seminar and the strategy of approach.

2. Examining various ideas put forth by participants for the plan of action suggested above.

3. Preparing lists of individuals, firms, institutions, offices etc., to be interviewed and visited.

4. Developing criteria for deciding educational value of play-materials.

5. Demonstration of play-materials and discussion there of.

6. Suggesting guidelines for selection and purchase of samples of play-materials of educational value.

7. Developing proformas for data collection, tabulation etc.

8. Developing ideas and methods for preparation of prto-types.

9. Suggesting ideas and methods for preparation and dissemination of Manuals for effective use.

10. Preparing an over-all plan of action for the period of the project (8 months).

It is requested that the participants would bestow their esteemed thought and come prepared with their suggestions for all the ten points indicated above.

A. C Deve Gowda
Director of the Seminar

APPENDIX III

List of Play Materials and Toys found in different schools of Bangalore City and other places of Karnataka.

A survey of the play materials (educational) and toys available in the selected nursery schools of Bangalore City was undertaken by the two investigators working on the project 'Educational Play Materials'. This survey was conducted in the month of March '76. The investigators when they visited some selected nursery schools in the Bangalore City, took a list of educational play materials used in each school. Finally, the following comprehensive list of these materials was prepared:

1. Magnetic Board and Magnetic letters
2. Mobile train
3. Picture word making
4. Geometrical insets
5. Nesting jars
6. Building blocks
7. Circle and Sector Board
8. Colour tablets
9. Action word introduction
10. Name cards

11. Colour pairing peg board
12. Picture puzzles
13. Sewing board
14. Match-a-shape test board
15. Mushroom board
16. Hammering rods
17. Cylindrical blocks for sound making
18. Sand paper letters - both in language & words
19. Cylindrical blocks of different sizes
20. Doll house
21. Counting frame
22. Counting glass beads
23. Puppets
24. No. 1-10 cardboard
25. Plate beads (coloured)
26. Kannada alphabets
27. English alphabets (wooden)
28. Animals (coloured cardboard)
29. Animals (colourless)
30. Assembly - Elephant, doll, train, bus man etc.
31. Touch method box (rough, smooth, hard & soft)
32. Numbers and digits (wooden)
33. House building (Plastic)
34. Tractor and gun shot
35. Small beads (wooden)

36. Vegetables on the cardboards
37. Fruits on the cardboards
38. Steriognastic bag (12 pairs-wooden)
39. Big pyramid
40. Culindrical insets
41. Coloured pegs with peg board (61 pegs)
42. Pagoda: (Genius way of learning)
43. Crystal (capturing child's imagination)
44. Expanding horse
45. Musical instruments
46. Plastic boat
47. Flash cards-English & Kannada
48. Wall clock
49. Posting basket
50. Graded wooden cubes
51. Graded shallow cubes
52. Graded colour cubes
53. Railway engine joining pieces
54. Coloured cylinders (in different diameters, sizes & colours)
55. Geometrical insets (i) Solid materials
(ii) Graphic representation
(iii) Thin outline
56. Spindle box
57. Seguin box-addition. 2 sets (11,22,33,44)

58. Pouring activity set - a. big beaker
b. small beaker
c. tray
d. rubber sheet
e. bottle
f. funnel

59. Polishing activity set - a. shoe
b. brush
c. vessels

60. Pairing activity set - eg., seeds any similar things

61. Sorting tray with wooden pieces

62. Carpentry

63. Solids in clay, Vegetables, Fruits etc.

64. Clay for children

65. Crooved letters and numbers

66. Paper cutting (for co-ordination of hands)

67. Brush painting and drawing

68. Picture cubes

69. Number concept & serialization beads

70. Insets box (dimension concept)

71. Kidd cog

72. Geometrical construction box

73. Sample of different animals

74. Play town (plastic)

75. Cooking set

76. Dynam fractions kit

77. Mobile kit

78. Balance kit
79. Three in a line kit
80. Mini peg
81. Shap-col-Tex kit
82. Peg board
83. Ball on stick kit - 1
84. Ball on stick kit - 2
85. Fix on pipe kit - 1
86. Fix on pipe kit - 2
87. Fix on jack construction kit
88. Add and take away kit
89. Pop in balls kit
90. Cube metric kit
91. Clock face
92. Geo strip kit
93. Multibeads kit
94. Polygana kit
95. Brick builders
96. Beads with numericals
97. Numerical number plate with coloured rods
98. Counting frame
99. Dices
100. Dynam thread beads number set

APPENDIX/V

List of selected Nursery Schools in the Bangalore City visited by the Investigators in connection with the Project 'Educational Play Materials' during the month of March 1978.

1.	St. John's Nursery School	Frazer Town
2.	Clarence Nursery School	Frazer Town (Near Asoka Theatre)
3.	Cluney Convent	Malleswaram
4.	Hymamshu Sishuvihar	Malleswaram
5.	Play House Sishuvihar	Malleswaram
6.	Malleswaram Sishuvihar	Malleswaram
7.	Women's Peace League	Gandhi Bazaar
8.	East West School	Gandhi Bazaar
9.	Home School	Basavangudi
10.	Vidyamandir	Doorvaninagar(ITI)
11.	HMT Nursery School	Vimanapuram
12.	Stella Maris	Palace Orchard
13.	Poorna Pragna Nursery School	Palace Orchard
14.	Kiddy's Nursery School	Malleswaram
15.	Carmel Nursery School	Rajajinagar
16.	Visweswaraiah TTI (Nursery)	Tata Silk Farm
17.	Ashok Sishuvihar	Chamarajpet
18.	Prathibha Balamandir	Basavanagudi
19.	Mahila Mandal Nursery School	I R Colony
20.	Sophia School (Nursery)	Near Basava Bhavan
21.	Kumaraswamy Vidyamandira	Hanumanthanagar
22.	Nirmala Vidyalaya	Chamarajpet
23.	Holy Christ Nursery School	Jayanagar
24.	Murugan Cultural Nursery School	Jayanagar 6th Block
25.	Kennedy Memorial Nursery School	Wilson Carden
26.	Parents' Association	Rajajinagar

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APPENDIX VI V

Names of Places and Persons visited during the Field Trips

I. Channapatna:

1. Meenakshi Toys Emporium
2. Artisan Training Centre
3. Assistant Educational Officer's Office
4. Sri Varadachar, Clay Model Expert, Bannikuppe Village.

II. Mysore:

1. Sri S R Krishnamurthy, Proprietor, The Indian Mercantile Corporation, Toy Palace, Ramavilas Agrahara, Mysore.
2. Mysore Industrial Concern, Municipal Building, Dhanwantri Road, Mysore 570 001
3. Mysore Toys, Ontikoppal, Mysore
4. Jagadamba Sishuvihar, Mysore
5. Gopalaswamy Nursery School, Mysore
6. Sri L Mahalingappa, International Handicrafts, Irwin Road, Kalamma Temple Street, Mysore.
7. Sri K Ramaswamy, Clay Model Expert, No.759, 6th Cross, Ramanuja Road, Mysore-4.
8. Sri Krishnachari (Workshop), Basuvina Karohatti, Ramanuja Road, Mysore.
9. Vani Vidyamandir Nursery School, Mysore.

III. Dharwar:

1. Smt M G Goundar, Child Development, Project Officer Dharwar.
2. Rural Development Training Centre, Dharwar.

3. Anganavadis run by the Women and Child[illegible] Department.

4. The Lion's Club Nursery School, Dharwar.

5. Karnataka University Campus, Dharwar

6. Smt Sarojini Naik, Superintendent, Government Training College for Women, Dharwar

7. Ramashraya Book Depot, Subhas Road, Dharwar-1.

8. Bharath Prakashan, Subhas Road, Dharwar-1.

9. Karnataka High School (Nursery Section), Dharwar.

IV. Gokak:

1. The Government Carpentry Training Centre, Gokak.

2. Karnataka Health Institute, Ghataprabha.

3. Gokak Toys Manufacturing Company, Gokak.

4. Assistant Educational Officer's Office.

V. Belgaum

1. Assistant Educational Officer, Rural Division.

2. Assistant Educational Officer, City Range.

3. Sri Mudaliyar, Educational Play manufacturers Jedgalli

4. Balavrindavana, Nursery School, Belgaum

5. Sri D K Humkar, Clay Model Expert.

6. Marathi T T I, Rangubai Palace Road, Belgaum

7. Government Dolls and Toys Training Centre Kodolkarigalli.

8. Hindi Medium Nursery School, Belgaum.

VI. Shimoga:

1. St Joseph's Nursery School
2. Sri Devappa Badigar, Artist, Soraba.
3. Assistant Educational Officers, Sorab & Sagar.
4. Mallikarjuna Schools, Shimoga
5. National Education Society Nursery School.

VII. Mangalore:

1. Assistant Educational Officer's Office
2. St. Agnes Nursery School.
3. Government TTI for Women.
4. St. Muller's Charitable Centre (Rehabilitation Centre)
5. Kit-Kat Toy Centre
6. Sri Diwakara Patawardhana, Yakshagana Artist Belthangadi.
7. Sri M. M. Hegde, Advocate, Coondapura
8. Roshini Nilaya Nursery School, Mangalore
9. Assistant Educational Officer, Kumata
10. Sri Devanna Kamath, Uppinakudru P O., Coondapur Taluk, South Kanara.

APPENDIX ~~VIII~~ V

List of Participants of the Seminar

1. Smt S N Nagarathna, DSERT, B P Wadia Road, Bangalore-1.
2. Smt. Tirumalamma, Head Mistress, Malleswaram Shishuvihar, V Cross, Malleswaram, Bangalore -3.
3. Smt Sarojini Naik, Superintendent, Government Training College for Women, Dharwar
4. Sri M K Patil, Assistant Educational Officer, Gokak, Belgaum District.
5. Smt Manjula Rama Rao, Superintendent, Himamshu Nursery TTI, 16th Cross, Malleswaram, Bangalore 560 003
6. Sri S R Krishnamurthy, Proprietor, Toy Palace, Rama Vilas Agrahara, Mysore.
7. Sri V Balasubramanyam, Principal, Child Development Unit, 16, Shankar Mutt Road, Bangalore - 4.
8. Ms. Susheela Bai, S Lecturer, Government Junior College for Women, Mangalore.
9. Sri G Krishnamurthy, Deputy Director of Public Instruction, Educational Technology Cell, DSERT, B P Wadia Road, Bangalore-4.
10. Shri A A Mecci, Assistant Director of Public Instruction Audio Visual Education Section, New Public Offices, Bangalore-1.
11. Smt Indira Swaminathan, Director, Play House, 15 Cross, Malleswaram, Bangalore-3.
12. Mr Prapullachandra, Proprietor, Mysore Toys, Ontikoppal, Mysore.
13. Ms Asha Kohli, Media Resource Person, Sophia High School, Bangalore.

Smt Indu Krishnappa, Asst. Manager, 'Kaveri'
Karnataka State Emporium, M G Road, Bangalore.

Sri Hari Parameswaran, Dynam Engineering
Corporation, 6, Haudin Road, Bangalore 560 042.

Sri Basappa, Senior Assistant DPI (Technical Education),
Office of the Mid-Day Meals, Seshadripuram, Bangalore-20.

Sri G S D Sharma, Nehru Smaraka Vidya Kendra
37, 30 Cross, 7 Block, Jayanagar, Bangalore 560 011.

Sri D M Subramaiah, Principal, Sri Visveswaraiah
Pre-Primary TTI, Basavanagudi, Bangalore-4.

Sri K Ananthanarayana, Crafts, Trades & Scientifics,
Kshetraiah Road, Mysore-1.

Miss Nalini Rao, Department of Post-Graduate Studies
in Education and Research, Manasabhavan, Jnanabharathi,
Bangalore 560 040.

Smt V Gaonkar, Department of Home Science,
University of Agricultural Sciences, Dharwar.

Smt Shanthalakshmi, Teacher (Nursery Section),
Sophia School, Bangalore.

UNIT STAFF

Sri S R Rohidekar, Senior Visiting Fellow (Hon.),
Education Unit, ISEC.

Sri A S Seetharamu, Fellow, Education Unit, ISEC.

Miss Usha Devi, M D, Technical Assistant, Education
Unit, ISEC.

Sri M Siddarajappa, Field Investigator, Play Material
Project, ISEC.

Sri V K Krishnappa, Field Investigator, Play Material Project, ISEC.

Miss. Shantha, N Research Scholar, Education Unit, ISEC.

Smt N S Aruna, Research Scholar, Education Unit, ISEC.

Smt Pramela Bai, D, Research Scholar, Education Unit, ISEC.

Miss. Nusret Fathima Jehan, Research Scholar, Education Unit, ISEC.

APPEND X ~~XXXXX~~ VII

List of Exhibits brought by different schools for display at the Workshop.

I. The Carmel School, Rajajinagar, Bangalore:

1. Mobile Nursery Rhyme
2. Apple tree
3. Chart on the 'Thirsty Crow'.
4. Chart on Numbers
5. Letters from A to Z.

II. Baldwin Girls High School (Nursery Section):

1. Stand (with 6 milk bottles)
2. Boot with Lace
3. Puzzle sets (4 Nos.)
4. Shapes (10 pieces in each)
5. Building words (12 pieces - blocks)
6. Buttoning (3 frames)
7. Library books (10)
8. Big photos (4)
9. Birthday Chart (1)
10. Time Table (1)
11. Charts (5)

III. R V Nursery School:

1. School Diary
2. Vegetable Chart
3. Fruit Chart
4. Alphabet Chart
5. Number Chart
6. Chart showing the Development of Child.
7. World Flags.
8. Albums of the following:

i) broomstick work
ii) coloured paper work
iii) vehicle book
iv) alphabets & numbers
v) animals and birds
vi) flowers and fruits
vii) nursery rhymes
viii) general interest

9. Models of the following:

i) double decker
ii) lorry
iii) jutka
iv) bullock cart
v) coloured jars

IV. Poorna Pragna Education Centre, Sadasivanagar:

1. Spindle box - 1
2. Rollograph - 1
3. Geometrical Insets - 1 set (six pieces)
4. Odd and Even Number Chart - 1
5. Colour Chart - 1

V. Chennamma Memorial School, Mission Road:

1. Advance Arithmetic Bead Material Board.
2. Addition, Subtraction, Multiplication and Division Board (4 Nos.)
3. Decimal system (4 Nos.)
4. Multiplication with Beads)

VI. Vidya Mandir, ITI - Nursery School Teaching Aids and Sense Training Materials:

I. I. Fruit Models - 12
II. Naming the picture - Kannada - 12 sets
English - 7 sets

III. Number Work:

i) Beads from 1 to 10 - 2 sets
ii) Beads in two's - 100 sets
iii) Beads in three's - 40 sets
iv) Beads in ten's - 20 sets

IV. Sense Training Materials - 6

VII. Corporation Nursery School, Kannappa Park:

1. Zingel bells
2. Merry - go - round
3. Steps
4. Two cocks
5. Three carts
6. Two geese
7. Bananas
8. X'mas Tree
9. Dolls
10. Two Swans
11. Building blocks

VIII. Corporation Nursery School, G I Park:

1. Puppets - 4
2. One Album
3. Kinds of Stones
4. Sewing Cards
5. Peg Board
6. Fix on Tape Kit
7. Masonite Cards
8. Matching Material Cards

IX. Indian Preparatory Nursery School, Malleswaram:

1. Model of Zoo
2. Model of Post Box
3. Model of Animals and Birds
4. Nursery Rhymes
5. Picture Puzzle

Appendix VIII

List of materials prepared by the Participants of the Workshop

I. Chennamma Memorial School:

1. Clay Models:

i. Cup and Saucer
ii. Tumblers
iii. Pestle and Mortar
iv. Well
v. Basket
vi. Stove
vii. Top
viii. Grinding Stone
ix. Vessels
x. Chapati Press

2. Paper Models:

i. Basket
ii. Dust bin
iii. House
iv. Flower Vase
v. Boat
vi. Post Box

3. Educational Value:

Clay Models:

These help the children to learn about the different shapes of each article they make with their hands and also the use of each article.

Paper Models:

These help the children to learn the art of cutting paper in geometrical shapes. Gradually they learn to cut the paper according to their own ideas.

II. Sri D Krishna Murthi, Hon. Principal, Sri Jagadamba Sishuvihar Nursery Teachers Training Institute, Mysore:

1. Clay Models:

i. Ball
ii. Pot (Flower)
iii. Cup

iv. Hallow
v. Pomegranate
vi. Rabbit
vii. Cobra
viii. Rat
ix. Grapes
x. Kodabale
xi. Manga

2. Stick laying designs:

III. Karnataka State Council for Child Welfare.

1. Paper Bead Chain.

2. Basket, Aeroplane, Kum Kum Bharani, Ink Bottle, Mat Small Box, Flower, Boat, Photo frame, Fish, Shoes, Shirt, Coat, Paper Cutwork.

3. Clay Models:

Shapes-Circle, Straight Line,
Square Rectangle,
Triangle Cross
Semi-Circle

Children learn many things from paper cuttings:

They can improve their knowledge. They will come to know the use of waste papers. They can point out the names of the articles that are prepared and their uses too.

Since children are fond of mud and water, by giving clay to them, it is possible to discover and identify the talents and creative ability they have. Children never get bored to play with clay.

IV. Baldwin Girls High School, Richmond Road, Bangalore-560 025:

(Age group - 4 to 6 years)

Nursery Class (Tortoise Race):

1. Materials used:

i. Paper plates
ii. K C Cardboard
iii. Paints
iv. Twine
v. Glue
vi. Scissors

a) Paper plates, easily available along with twine and paints and . G Cardboard.

b) The shapes of the head, tail and legs were drawn on K G Cardboard and cut out.

c) The pieces were assembled together to form a tortoise.

d) The tortoise was painted and features marked.

e) Twine was inserted through the neck in order to allow movement.

2. Educational Value:

a) The children learn a competitive spirit - Victory and defeat.

b) They learn the slowness of the tortoise with regard to its walk.

c) To give, amusement and thrill to the little ones.

d) For better concentration and muscular development.

V. Smt Deenamma George, Nursery Teacher, CFTRI School, Mysore:

1. Paper Folding

2. Paper Beads.

1) Paper Folding:

Material needed: Coloured Paper.

Cut the paper into 4" squares and fold it in a particular manner. One can make different articles such as horse, shirt, boat, envelope etc. This can be given to children in Nursery Schools under the age of 6 years. They play with them - for eg., they put the boat in the water and enjoy the floating boat.

2) Paper Beads:

Material needed: 1) Glaze paper
2) Piece of broomstick
3) Glue

Cut the paper into long strips as shown below. Roll the broader end on the stick and apply a little gum to the other end of the piece and remove the stick. Thus different coloured beads can be made and we can give them to the Nursery children as an indoor play material. We can even give a piece of thread and ask them to thread them. They enjoy it very much.

VI. Sri D M Subramaiah, Principal, Sri Viswesvara Pre-Primary Teachers Training Institute, Basavanagudi, Bangalore 560 004:

1. Activity: Clay modelling (Children between 3 & 4) (Graded Exercises):

An young child takes to this activity like a fish taking to water. Almost all experiences pertaining to Language, Arithmetic etc., may be got out of the children when he is encouraged to play with clay and make different kinds of shapes.

The teacher will have taken the trouble of making different models of letters, figures, animals, geometrical shapes etc., and keeping them in the class room. When the child is given clay for his play activity, the teacher will make different shapes in the presence of the child and allow the child to make whatever shape he can form out of the clay - simple spherical shapes, lines, putting the lines together and getting different shapes etc. Later on easier letters, easy geometrical forms will follow. This creative and constructive activity is most useful for the all round development of the child.

VII. Sri Mohamed Akbar Khan, Principal, Al-Ameen Urdu Medium Pre-Primary Teachers Training Institute, [illegible]:

1. Clay Modelling:

Clay work is both creative and constructive activity. It is free play activity also. In order to remove mental tension and vent up energy, clay modelling is very useful activity for children. Children enjoy to play with mud, clay and water.

With this objective in mind I prepared some models and arranged them in a form of Statue.

VIII. Carmel High School, V Block, Rajajinagar, Bangalore-10:

1. Milk Bottle Covers:

i. This shows the children how to use their fingures by feeling.

ii. How to count.

iii. How to add and take away.

iv. How to fold, roll and squeeze - these are the movements of fingers.

v. How to make things to play like cups, bowls, plates etc.

vi. During the festival season this comes in handy for making deevali lamps.

2. Shells & Paint:

To teach the children how to count, paint and feel.

3. Match boxes & Paste:

Teaching the children how to make different articles.

IX. Smt. Manjula Rama Rao, Hymavathi Nursery Teachers Training Institute, IV Main Road, Malleswaram, Bangalore - 55:

1. Materials Prepared:

1. A Picture Book:

One K G Cardboard is folded and cut up to bring the shape of a book.

a) This type of book can be easily prepared.

b) Pages can be added and pictures can be changed.

c) The book can be prepared at low cost.

d) With some guidance children also can make their own book of this type.

e) This can be used for children of any age.

Educative Value:

1) Pictures remind children of what they have already seen.

2) Making a book of this type is a work which is much enjoyed by children.

3) Making this work trains their finger Muscles, that is, they learn a skill.

4) Makes the child aware of his capacities - that makes him confident.

2. Mat: (Using Glazed Paper of two different colours)

1) Trains the finger muscle.

2) Makes the child aware of his capacities, abilities. That gives him confidence.

3) Appreciation of colours (development of aesthetic sense).

APPENDIX IX

List of Participants of the Workshop

1. Smt S Bhatia, Chairman and Miss Kalyani Nair, Lecturer Karnataka State Council for Child Welfare, 135, III Cross, Nandidurg Road, Bangalore 560 006.

2. Sri M S Subramanya, Welfare Officer, Karnataka State Social Welfare Advisory Board, 149/37, National College Road, Basavanagudi, Bangalore 560 004.

3. Smt N Jayamani, Assistant Director, Women and Children's Welfare, Multistoreyed Building, Vidhana Veedhi, Bangalore 560 001.

4. Smt Rajalakshmi Muralidharan, Reader and Co-ordinator, CET Cell, NCERT, New Delhi 110 016.

5. Mrs Indira Swaminathan, Director, Play House, XV Cross, Malleswaram, Bangalore - 3.

6. Smt S N Nagarathna, Lecturer, DSERT, B P Wadia Road, Basavanagudi, Bangalore-4.

7. Mrs Indu Krishnappa, Assistant Manager, Kaveri Arts and Crafts Emporium, Mahatma Gandhi Road, Bangalore - 1.

8. Sri R G Agnihotri, Dynam Engineering Corporation, No.6, Haudin Road, Bangalore 560 042.

10. Smt Deenamma George, Teacher, CFTRI Nursery School, Mysore.

11. Smt Manjula Rama Rao, Principal, Hymamshu Jyoti Kala Peetha, Nursery TTI, XV Cross, Malleswaram, Bangalore-3.

12. Sri D Subramaiah, Principal, Visweswaraiah Pre-Primary Teacher Training Institute, Tata Silk Farm, Bangalore-4.

13. Sri M H Vijayendra, Superintendent, SLN Teacher Training Institute, Fort, Bangalore-2.

Sri D Krishnamurthy, Principal, Jagadamba Sichan Mandir (Pre-Primary Teachers Training Institute), Bijapur.

Sri Mohammed Akbarkhan, Superintendent, Al-Amin Anjuman Pre-Primary Teachers Training Institute, Gulbarga.

Sri L Siddarajappa, Field Investigator, Play Material Project, ISEC.

Sri V F Krishnappa, Field Investigator, Play Material Project, ISEC.

Smt. M N Usha, Technical Assistant, ISEC.

Ms M D Ushadevi, Technical Assistant, ISEC.

Smt Aruna, Research Fellow, ISEC.

Ms Fathima Nusrat Jehan, Research Fellow, ISEC.

Ms Shantha, N, Research Fellow, ISEC.

APPENDIX ~~VI~~ X

List of Play Materials collected for the Project

Sl.No.	Name of the article
1	A B C D Letters
2	Magic Egg
3	Tea Set
4	Counting (Joker Pyramid)
5	Family Planning
6	Screen boards
7	Cooking set
8	Animal puzzle
9	Sewing Card
10	Model Clay
11	Construction block
12	Kannada Cut letters
13	Western Play Doll
14	Traingular Doll
15	Zebra
16	Musical instrument
17	Blue bird
18	Baby bird
19	Moving Cock
20	Brinjal (wooden model)
21.	Pomegranate "
22	Pumpkin "
23	Purple berries "
24	Sweet Potato "
25	Mango "
26	Dorgoy (Chillies) "

Sl.No.	Name of the article
27	Custard aple (wooden model)
28	Safarabeda "
29	Lemon "
30	Guva Bunch "
31	Drum stick "
32	Plantain "
33	Apple
34	Nesting Jar
35	Elephant
36	S T Bus Model
37	Joker
38	Cock (small)
39	Horse (small)
40	Bullock Cart
41	Doll Cart
42	Picture Domino
43	Yakshagana Puppet (Devendra)
44	Yakshagana Puppet (Ravana)
45	Shap-Col-Tex Kit
46	Polygana Kit
47.	Minipeg
48.	Fix-on-Pipe - Kit I
49	Fractions Kit
50	Three-in-a-Line Kit
51	Spiral attribute Kit
52	Spiral Ball Kit
53	Balancer
54	Karnataka B S
55	Dasara
56	Engine
57	Cart

Sl. No.	Name of the articles
58	Parade Nuts
59	Necklace
60	Jula
61	Cup and Ball
62	Plane
63	Joker
64	Titi Kiti
65	Wall birds
66	Birds (3)
67	Animals - big size (2)
68	Animals - small size (4)
69	Beads
70	Floor Mosaic
71	Assembly Train with 3 Cars
72	Assembly Educational Show
73	Jeep - small size
74	Jigged name & digit number
75	Flower & Alphabetical Puzzler
76	Countablet (Dynam)
77	Peg Board
78	Brick Builders
79	Fix-on-Tape Kit I
80	Fix-on-Jack Construction Kit
81	Ball-on-Stick Kit I
82	Ball-on-Stick Kit II
83	Balance Kit
84	Geo-strip Kit
85	Multibeads Kit
86	Add & Take away Kit
87	Thread bead Number set

Sl.No.	Name of the article
88	Colorama
89	Mobile Kit
90	Cubometric Kit
91	Chinese Tangrama Puzzle
92	Clock Face (12 pieces)
93.	Dice
94	Toppin balls Kit
95	Trainguler Cube (Clay Model)
96	Square (Clay Model)
97	Wooden blocks
98	Flash Cards
99	Clay Custard Apple
100	Wooden Geometrical Shapes
101	Clay Cooking set
102	Plastic Tubes
103	Wooden Dolls (Bombai)
104	Couric Shells (big and small)
105	Rattles - 2 kinds
106	Bow and Arrow
107	Colour Goggles
108	Bellow Whistle
109	Clay Violin
110	Wooden Comb
111	Tin Mould
112	Clay Toys
113	Metal Horn Cap
114.	Metal bells (i) big, (ii) small (iii) medium
115	Round shaped bells (big & small)

Sl.No.	Name of the Article
116	Wooden spoons - big
117	Wooden spoons - small
118	Kavade Board
119	Corner (big)
120	Corner (small)
121	Cookie mould - 4 pieces
122	Rangoli Roller
123	Assembly train
124	Assembly elephant
125	Road Roller
126	Train set assembly
127	Assembly dog
128	Clock with beads
129	Train set
130	Nove toy - 3 times
131	Myzoo animals (toys)
132	Lotto Zoo animals (12 items)
133	Transport (21 pieces)
134	Shape insect articles
135	Slit interlocks - 5 varieties
136	Interlocking toy - 3 variety
137	Costumed women of India - 10 varieties
138	Winding Geo construction
139	Num erical figures with flat pegs
140	Cat set - 3 times
141	Push and Pull toys - 2 items
142	Dressing dolls - 2 varieties
143	Lac doll
144	Balance men

Sl.No.	Name of the article
145	Rolling bird
146	Pencil top dolls - 12
147	Prachute toy (Bamboo)
148	Plow Plastic Rubber Pan
149	Basket
150	Bamboo rings
151	Jolli Pan
152	Kerosene Pump
153	Pot Stand
154	Iron sieve
155	Lac animals (10)
156	Lack Cock
157	Lac Farmer
158	Lac Policeman
159	Lac Grinding Lady
160	Lac Jai-Kisan
161	Lac Pot set
162	" A B C
163	" 1, 2, 3, numbers
164	" Three-wise Monkey set
165	" Music set
166	" Thief and Police
167	" Bead Counting Plate
168	" Kinnal Cow and Calf
169	" Gokak Fruit Set

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